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| (30) Priority:                        | <b>13.05.97 GB 97 9709659</b> | (71) Applicant: <b>SURFACE TECHNOL SYST LTD</b>                      |
| (43) Date of application publication: | <b>02.12.98</b>               | (72) Inventor: <b>MCQUARRIE ANDREW DUNCAN<br/>BOMAN LEE CAMPBELL</b> |
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**(54) METHOD FOR ETCHING WORK AND APPARATUS THEREFOR**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To improve the efficiency of an etching stage by continuously supplying gaseous XeF<sub>2</sub> and executing etching while the etching is heretofore executed by pulsatively supplying gaseous XeF<sub>2</sub>.

**SOLUTION:** An XeF<sub>2</sub> supplying section 12 consists of an XeF<sub>2</sub> source chamber 16 including a tray and ampoule 17 for an XeF<sub>2</sub> crystal 17a, a tank 18 via a valve 19, a flow rate controller 13 supplied with this material by the tank 18 and a valve 20 between the tank 18 and the flow rate controller 13. Pressure sources 21, 22 are provided respectively to maintain the tank 18 and the XeF<sub>2</sub> source chamber 16 at the sublimation pressure of the XeF<sub>2</sub>. This apparatus ensures the stable supply of the XeF<sub>2</sub> to an etching chamber.

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